

As to the *Turky* way of dressing *Leather*, it is to be observ'd, that their *Leather* is nothing so strong and serviceable as that in *England*; an assured proof whereof is the Wearing. And though it be commonly reported, that the *Leather* in these parts, though thin and supple, will hold out water; yet this is to be understood, that the *Turks* in their winter-boots, between the lining and the leather, put a Sear-cloth, which being curiously sow'd in the seams, will keep out water, though you put them in it for divers hours together. In cleaning of their leather, they use *Lime* and *Album Gracum*; and instead of Barks of trees, they employ *Valonia*, a sort of acorn growing on the *Oakes*. I am persuaded, that our *Acorns* in *England*, if they could be spar'd for it, would perform the like effect, and perhaps better; seeing that many times the *Valonia* burns the *Leather* so much as to make it little serviceable; whereas our acorns are probably more temperate, and so might better serve the turn.

An Account of two Books.

II. Vini Rhenani, imprimis BACCARACENSIS, Anatomia Chymica, à Joh. Davide, Portzio Phil. et Med. D. Heidebergæ, 1672. in 12°.

THIS Author treateth in this Book of the Soile proper for *Rhinish Wine*; of the kinds of that *Vine* and *Grape*; and of the *Must*, *Wine*, *Spirit*, *Tartar*, *Vinegar*, and particularly of the two *Salts*, the *Acid* and *Alkali*, as the chief Ingredients of *Wine*, and according to *Tarbenius*, of all natural things.

Speaking of the fertility of the Soil proper for *Vines*, and discoursing of the *Nitrous Salt* coming down in rain and snow, he delivers a way of collecting that *Salt*; of which we leave the skilful to judge upon the reading of the Book.

The *Grape* he affirms to be compounded of an *Acid* and a prevalent *Alkali*; observing, that grapes that are thin-skin'd grow sooner ripe, and thrive even in a temperat climat; and taking also notice, that struck with hail when they are big and begin to ripen, they harden and never grow full ripe.

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Having discoursed of the way of preparing Vessels for tuning up of wine; he is very particular in the matter of the Working of wine: Where he distinguisheth between *Effervescence* (which alone he allows to be in Wine) and *Fermentation*; the latter being to him nothing else, than an Action and Reaction of the internal parts of the Acid and Alkali, by which the Spirits are separated *without* Precipitation; whereas by *Effervescence* he saith there are no Spirits separated, and though therein be also an action and reaction; yet, in his opinion, 'tis done *with* a Precipitation: so that, according to him, all Fermentation is made with an *Effervescence*, but not *vice versa*; he also affirming, that there may be an *Effervescence* between two Acids, when their particles are very active and very sharp or when a stronger is poured on a weaker. Where he adds the manner, how the Must doth *effervescere*; viz. by the action of the Alkalifate parts upon the Acid ones, which they subdue; whereupon the *Effervescence* ceaseth, viz. when that Alkali is altogether satiated by the Acid.

Here he takes notice of that *Effervescence* observ'd in Wine at the time of the blossoming of Vines; and is of opinion, that it is caused by the Heat, which being at that time more intense, worketh upon the said two Salts, and opens them, and so induceth a new *Effervescence*.

After this he teaches the way of making *Must*, before the Wine works, either by it self, or by boyling it up. *By it self*, when 'tis so close vessel'd up, that it cannot work; which is call'd *Sump-wine*, a liquor that extremely affects and rends the brain, by reason, that the Salts, that were not before set at liberty to work, being now open'd in the Stomack, do send up abundance of those pungent steams, so grievously afflicting the brain. *By Boyling*, when they take strong Vessels not quite fill'd; cutting them into a cellar, wherein they make first a mild fire, and then increase it, and after a while lessen it, that so the boyling may cease by little and little of it self; which is perform'd in 36 or 40 hours, according to the bigness of the vessel. Here the Wine-boylers, instead of common candles (which would melt by the heat) do slit Beech-wood dried and lighted by which they also find, when the Must is boyled enough

nough, those lights burning very dim as long as tis not enough, by reason of the abundance of steams choaking the light; but burning clear, when it hath boiled enough. About 7 or 8 days after the Must hath been thus boyled, it begins to work; after which working 'tis call'd Wine.

They prepare another kind of boyled Wine, by boyling the Must to half, and then they leave it so, or put into it, whilst boyling, roots and herbs, according to the several uses they design it for; as *Elechampane*, *Worm-wood*, *Cardus benedictus*, *Centory*, *Rosemary*, *Sage*, *Baum*, *Orang pills*, but especially *Juniper-berries*. Being thus prepar'd, it works afterwards more slowly.

If the boyled Must by two violent an Effervescence cast out the Lee (by which it grows vappous or dead,) they stop it by some fatty substance, as with fresh un-salted butter put upon a vine-leaf, or by fresh lard applied to the mouth of the vessel, whereby the furious acid parts meeting with an alcali, and being-saturated thereby,, retire and descend again.

There being two sorts of this wine, Reddish and White, he notes, that the Tincture of the Red is taken away by Sulphur kindled; the Alcalizat colour, got out of the mark or husks, being precipitated by the Acid Sulphur. Sulphur they make also use of to keep their wines, as they also do of Nutmegs, instead of Sulphur.

Discourfing of the *Baccharach*-wine in particular, he notes, that it differs from other Rhenish wines in colour, odor, taste and virtue. After its working it hath first a luteous colour, which they render limpid by *ichthyocolla* (being very Alcalical) cut, and kept infused in rain-water for 10 or 12 hours; and then torn into small pieces, and so put into some Wine, and therewith shaken twice every day, till it be quite dissolved; which is done in 6 or 7 days. When dissolv'd, they percolate it through a sieve by powring a little wine upon it, and thus percolated they pour it out of one vessel into another until it foam, and then they pour it into the wine to clarify it; some adding sand or powder'd Venice-glass (meer Alcalies,) whereby, as heavy bodies, the tartareous feces go to the bottom. When they pour this solution into the Vessel, they use a stick, with a

little board perforated at the end of it, whereby they agitate and beat the Wine in the Vessel, and so render it clear, which it will be after 4 or 5 dayes; and then they vessel it out into other vessels.

As for the *Smel*, that wine is very fragrant, muscatellio and aromatic. Though there be one sort, that is rank (*hircum olens*; Germanicè *Brunzter*,) which he saith cannot be imputed to the Vessel, *nor* the kind of Vine alone, *nor* to the Earth alone, there being gather'd, in all vintages, out of the same Vine-yard and from the same kind of Vine-stock, a grape which hath none of that smell: But this smell not being perceived before the Working, he takes the cause of it from that Effervescence, whereby the Alkali hath a dominion over the Acid; this urinous smell being to the Author nothing but a meer Volatil Alkali, and the Effervescence, by reason of the copiousness of that Alkali in this kind of wine, during the longer. But that this smell is sometimes so rank in one and the same Vine-yard, sometimes not, he imputes to this, that in some years and soils, the soyl is more impregnated with an Alcalifat salt, which the Air abounds with at one time more than an other. This Alcalifat odor is lost by transvafation, that salt being thereby steam'd away.

The *Taste* of Baccharach-wine is generally very grateful; and for its Virtue, it is more incisive and diuretick, more stomachical and cardiacal, quickning the motion of the Spirits and exhilarating above the rest. Where he takes occasion to give an account of *Drunkennes*, which, in his opinion, is thus caused; viz. That the Bloud is circulated in the arteries more swiftly than it can be received into the Veins; whence comes a Giddiness and Stupefaction, which is frequently attended by a head-ach, from a forcible distension of the vessels.

Proceeding to the *Spirit of Wine*, he declares, that Spirits are nothing else but the fluors of Salts, or Salts resolv'd in their phlegme; Salts being nothing but Spirits concentrated. Where he observes, that from sweet wines, as the Greek, Muscadin, &c. a less quantity of Spirits is obtained by distillation, than from Rhenish, quantity for quantity. He also taketh notice, among

mong the divers wayes of rectifying Spirit of wine, of that of doing it *without fire*, viz. by an intense Cold, congealing the phlegm, and forcing the Spirit into the midst; as also of that of adding a fix't Alkali to the Spirit of wine, whereupon the Alkali, which is empty, will imbibe the phlegm, and so sink withal; whereupon the Spirit may be decanted, leaving the phlegm at the bottom.

Further, he observes, that Spirit of wine is, as 'twere, the Oyl dissolved in its essential phlegm, which solution is made in the working; every fermented Spirit being, to him, a dissolved Oyl; seeing that upon waters being powred on rectified Spirit of wine, it suddenly grows lacteous, just as a Rosin dissolved. It hath a power of dissolving all Sulphurs, whether fixt or volatil; and highly rectified Spirit imbibes Oyl.

He adds, that out of Spanish and other sweet wines less Oyl is drawn, than from Rhenish, and he refers Oyls to acids, because they are corrosif. He saith also that a purer and finer Oyl is distilled out of Rhenish wine, than out of other wines; which he affirms to be of excellent virtue, a great cordial, and to be preferr'd to the famous tincture of Pearl and Coral.

Hence he goes on to the *Tartar*, which he saith is precipitated by the Effervescence or conflict of the Acid and Alkali, and is condensed into a crystallin and stony matter, consisting of an inflammable Sulphur (which is an acid) and a fixt Salt. Here he takes notice, *that* the Tartar of Rhenish Wine and of that of *Montpelier* is preferable to all others; *that* Tartar of white-wine is better than that of red; and *that* sweet wines yield but very little Tartar, since 'tis the plenty of acid parts that afford the biggest and finest tartareous crystals. Yet *Acetum* has no Tartar though it contain a copious acid Salt; of which he renders this reason, that the Wine whence the *acetum* is made, had already deposed its tartar; besides that the alcalisate parts are wanting, which must needs concur to the concretion of Tartar.

He subjoyns the various *Uses* of Tartar; To *Gold-smiths*, for purifying and whitening of Silver, by boiling it in water and

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adding a little Allom to it : To *Chymists* and *Physicians* for making their *Regulus's* ; for the deflagration and separation of Sulphurs ; for preparing with the Creme of Tartar their *Tartarum Chalybeatum*, *Antimoniale*, *Emeticum*, *Diureticum* ; for making a *Tartarum Vitriolatum*, with Salt of Tartar dissolv'd in Air, and mixt with Spirit of Vitriol by a high Effervescence ; for making the *Spiritus vini tartarizatus* by a tincture drawn out of the Alcalizate salt of Tartar by Spirit of wine, &c.

He concludes this head with directing, how to reduce Salts into Elementary water, viz. by distilling in an Alembic, Salt of Tartar dissolved in the Air *per deliquium*, whence comes a phlegm ; and by distilling again the remainder dissolved as before ; and by going on so, till all be distill'd into a phlegm, and there remain at last nothing but an useless Earth.

After this he treats of *Acetum*, and esteems the best way of making it to be, by exposing it to the Sun-beams, thereby to separate the Spirits, and to open the acid and alcalisate parts, and to consume the phlegm by the heat, and thereby more and more to concenter the acid parts : Yet must not all the spirits avolate ; for then from the phlegm which remains after the distillation of the Spirit of Wine, *Acetum* would be made ; whereas the contrary comes to pass ; and the most generous wines (not the sweet ones, as Italic, Spanish, wherein the Alkali exceeds the Acid) afford the best Vinegar. The heat that is required to dissolve the Salts is a gentle and slow one, lest the remaining volatile parts be driven away, and there remain nothing but phlegm.

He ends all by teaching the way of making *Ceraise* and *Verdigrease* of plates of Lead and Brass ; and by enumerating the many other *Uses* of Vinegar, in fixing the Narcotique power of Opium, in inciding, attenuating, raising the ferment of the Stomack, repelling inflammations, resisting putrefaction, &c.

H. De *Poematum Cantu & Viribus Rythmi*. Oxon. à *Theatro Sheldoniano*, 1673. in 8°.

THE Author of this Treatise (which is the famous *Isaacus Vossius*, though not named in the Title) endeavors to make

make it out, that the Musick of the Antients is far to be preferred to that of our Age, forasmuch as Speech, how powerful soever at this day, yet, when put into a Song or rendred Musical, is not of that efficacy in moving our senses, as it was in times of old. For finding out the Cause of which, he observes chiefly three things in Singing; the Harmony, the Words, and the Rhythm or Meeter; the Harmony respecting the sound, the Words requiring a distinct enunciation for their clear Understanding; and the Rhythm consisting in a due and well-measured motion of the Song. As for the *Harmony*, he acknowledges, that the Moderns have largely handled it, yet without exhausting the argument. But for the two other parts, he affirms, that they have either totally neglected them, or dis-couraged of them besides the purpose. Which he endeavors to prove from hence, that since all songs and all harmony, how curious so ever, must prove but an empty sound, if the words sung are not understood, nor the motions significant; as they are not in the modern Musick, contrary to what was most carefully observed in that of the Antients. Where he appeals to Experience, by which he saith it will be found, that scarce the tenth part of what is sung by the Musicians of this age can be understood, and that they by making, contrary to nature, those Syllables long that are short, and those short that are long, and often repeating the same words ten times, do so disorder and mangle the genuin manner of pronunciation, that they quite destroy the true nature of the song. Besides this, he observes, that we labour under another very great defect, which is, that we are altogether destitute of the Rhythm, the Soul of Songs. And this is it, *he saith*, which hath induced him, to make out in this Exercitation both the nature of the Rythm, and its wonderful power in moving and raising the Affections: which with what success he hath perform'd, we leave to the judicious to determine.

Mean time, we shall here take notice of divers particulars, which our Author lays weight upon; such as are:

1. The Invention, Nature, Necessity, Efficacy and Number of *Poetical Feet*, which import different times and measures, and by the means of which not only the visible motions of the Body

dy, but also the latent senses and any motions of the Mind may be so lively represented, that there shall be almost nothing in things, that may not be exhibited by well composed Songs and Numbers.

2. The Nature of the *Rythm*, which he defines to be a System or Aggregate of Feet, the Times of which have a certain proportion to one another; which proportion when 'tis apt, the Verses or Songs are said to be *ᾠσμοί*, if not, *ᾠρητοί*. Wherefore for the concinnity of the Rythm, care must be had above all things, not to couple together such feet as differ in their times.

3. The aptness of the variety of the Rythm for expressing either Majesty, or Effeminacy, or Vehemency of Passions, as Anger, Grief, Love, &c.

4. The cause of the joint Loss of *Musick* and *Poetry* in *Greece*, where they had their Birth together, which he esteems to have been the Change of that Tongue and the Prosody thereof; which is the tenor of the voice according to which the Verse or Song is framed. The same Cause he assigns for the Loss of the *Latin* Poesy, and that chiefly upon the invasion of the Roman Empire by the barbarous Nations.

5. The Present Constitution of Poetry, which he saith is so ordered that the sole Endings, together with a certain and determinate number of Syllables, doe in a manner all that is done; without any care, of what nature and quantity those Syllables be, and consequently without Rythm, or observation of Metrical feet.

6. The Excellency of the true *Greek* tongue above all those, of which there remains any knowledge amongst us, and the culture of that tongue, rendring it most apt not only for expressing things, but also for framing Songs and Verses. Where the Author takes occasion of discoursing of divers Tongues, and their Peculiarities, after he had first treated of the two things that are to be consider'd in all tongues, the *Sound* and *Accent*, and enlarged upon the power and efficacy of the Letters both Vowels and Consonants, that form the Sound. Here he examines especially the Genius of several Dialects of the *Greek* tongue

tongue, and observes the Fast and Gravity of the *Spanish* language, the Harshness of the *German*, the Softness of the *English*, the Volubility of the *French*; the Elegancy and Neatness of the *Italian*, the Hardness of the *Polonian*.

7. The Cessation, amongst Musicians, of that great power of moving the Affections, which he saith hath been above a thousand years agoe, and ever since that the use and knowledge of the *Rythm* hath ceased, which alone, in the Authors opinion, could perform what no Musitian this day is able to do; whole Nature therefore and force he explains at large; subjoyning thereto his considerations of the Nature and Power of *Sound*, as farr as it concerns this argument, and inferring from thence the far greater force of those *Rythmical* Motions that are conjoynd with Sound, for the raising of affections: Observing further, that those Motions have so great a power, that even without any voice and sound they can raise affections more strongly, than any voice or oration. For the proof of which he alledges the ancient *Pantomimi*, whose Feet and Hands he makes no less eloquent than the Tongues of Orators; witness *Cicero*, who used to contend with *Roscio*, the Stage-player, which of the two should most vary the same sentence most manner of ways, the one by words, the other by gestures; which maketh our Author proceed so farr, as to affirm, that if we employed as much labour and time in learning the *Pantomimical* Art, as we do in learning a Language, we might possibly come to express our mind and thoughts as clearly by that way, as now we do by the aid of a Language: Nor does he think, that Mankind would suffer any thing by it, if the pest and confusion (*these are his own words*) of so many tongues were banisht, and, in lieu of them, this sole Art of the *Pantomimes* were known by all mankind, and men explain'd every thing by signs, nods, and gestures; in regard of which he thinks the condition of Brutes to be much better than that of men, seeing they signify without an interpreter their sense and thoughts more readily, and perhaps better, than any Men can do.

8. The skill of exploring the Internal affections of the Body by *Touch* alone, as we do perceive the External motions by the *Eye*. Where our Author exceedingly commends the skill of the

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Chinese Physicians (which he asserts to be undoubtedly true) in finding out not only that the Body is diseased, (which he saith is all that our Practitioners know by it,) but also, from what Cause or from what Part the Sickneſs proceeds. Whereupon he adviſeth, that, as we collect the manners and affections of men from their *Outward* motions perceived by the Eye, ſo we ſhould alſo, for attaining the Knowledge of their *Inward* and more latent affections, enlarge our Senſes and exerciſe that of *Touch*, till we be enabled to diſtinguiſh, and to reduce to certain *clafſes*, the forms and ſhapes of every Pulse; whereby we would alſo be led to underſtand the power and ſignification of every ſuch motion. And for the reducing of the ſeveral ſorts of Pulſes, he prefers to the method of *Galen*, (who, he thinks, hath rather provoked then ſatisfied our curioſity in his 15 Books of the Nature and Differences of Pulſes) that of *Herophilus*, of whom he affirms that he hath tied the ſeveral manners of the Pulse to Numbers or Metrical feet; the names and powers of which if they were as well known to Phyſicians, as they are to Muſicians and Poets, it would, in his judgement, be exceedingly beneficial for the Life and Health of man. For the encouragement whereof he repreſents, that, whereas there is not any Kind of motion, which is not to be found in the Muſical feet, it would coſt no great pains, according to thoſe to deſcribe the Motions of the Arteries; nor doth he think it very difficult, by uſe and exerciſe to come to know and to diſtinguiſh by Touch even the compound and diſcordant Pulſes. In ſhort, to make our ſelves Maſters in this ſkill, he would have us to labour ſo long in exploring the nature of mens Pulſes, till they become ſo well known and ſo familiar to us, as a Harp or Lute is to the Players thereon; it not being enough for them to know, that there is ſomething amiſs which ſpoileth the tune, but they muſt alſo know what String it is which cauſeth that Fault.

On this occaſion the *Publisher* thinks it will not diſpleaſe the Reader here to give him notice, that he lately ſaw a letter written from *Java* in the Eaſt-Indies, mentioning an Indian Treatiſe, much diſcourſed of, Concerning the *Art and Method of knowing Diſeaſes and their Events by the Sole beating of*
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the Pulse : And that some Curious persons in that Island had already written to some Religious men in *China*, desiring them to spare no pains in procuring it : To promote which, a sum of money had been a while ago sent thither for a reward to the Translators. Further, that those Persons in *China* had promised to employ all their interest there of doing the thing, as that, which exceedingly tends to the relief of mans health and the Comfort of their Life.

9. The Contemptibleness of the Modern way of Musick, which to him is such, that he saith, there is hardly so much as the shadow of the Pristine Majesty of it remaining ; wondering that those, who in this and the former age have written of Musick, have written nothing of the *Rythme*, or have done it so, that they seem to have been altogether ignorant of what it is ; regarding nothing but to please the Ear : Whereas, to affect the mind, 'tis necessary the sound should signifie what may be understood by the mind, without which there can be raised no true pleasure, nor any strong affection. In a word, he affirms, that if without partiality we compare the Ancient Musick with the Modern, and consider the Effects of both, we must either acknowledge the ignorance of the Modern Musicians, or evince to be false what the Ancients have delivered of the power and efficacy of their Musick.

10. The Excellency of the *Chinese* Musick, though that people doe complain of the loss of their antient way of Singing, which if they doe Justly, our Author scruples not to affirm, that their Musick must have been divine, seeing the remainders of it are so excellent, that they may easily silence all the Musick of Europe.

11. The rare contrivance for rendring even and strong sounds, of the Old Roman *Hydraulick Organ*, described by *Hero* and *Vitruvius*, and explained by our Author, and by him declared to excel our Organs, yielding an unequal and weak blast.

12. The Art of the Ancients of making such *Tibiae* or *Pipes* of so many different forms and figures, as there are kinds of affections concerning which he affirms, that there is none to be found this day, that do so much as know, how to make such
Pipes

Pipes that are able to produce such motions; Since our modern Artificers, in his opinion, do fail not only in the matter, of which those instruments are to be made, but also in the proportion, which is to be observed in their form: Forasmuch as 'tis now commonly thought, that, there being two *Tibiæ* of the same length, but of different thickness, the thicker of the two will yield a graver sound than the slenderer; which he saith, is contrary to Experiment; by which he alledges to have found, that the thicker the *Tibiæ* are, the acuter sound they yield, and the slenderer, the graver, provided you keep the same length. Where he undertaketh to correct *Galilæus* and *Des-Cartes* concerning this particular. He concludes all with this admonition, that if any have a mind to restore the Antient Musick, or to rectify the Modern, he must by all means imitate the diligence of the Antients in reducing all syllables to a certain quantity, and in restoring Metrical Feet, which, he saith, the Modern Musick is almost altogether destitute of.

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